# Literacy Design Collaborative

# Argumentation Module

# Plastics … to use or not to use?

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# MC900016887[1]



**LDC Argumentation Module**

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| **Module Title: Plastics…to use or not to use?** |

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| **Module Description (overview):**  Students will construct an argumentative piece which defends their position on the widely debated topic of the use of plastic water bottles and storage containers for drinks and foods. The unit of study, within which this module happens to fall, is chemical bonding. Students have been discussing three types of chemical bonding: ionic, covalent, and metallic and how this type of bonding affects the structure of matter. Students will construct a piece defending their position as well as using their knowledge of chemical bonding and compounds to explain either the benefits or the harmful effects of using plastics to contain our every day foods and drinks. |

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| Template Task (include number, type, level) | Teaching Task |
| Task 2: [Insert question] After reading \_\_\_\_\_ (literature or informational texts), write a/an \_\_\_\_\_\_\_\_\_(essay or substitute) that addresses the question and support your position with evidence from the text(s). **L2** Be sure to acknowledge competing views. **L3** Give examples from past or current events or issues to illustrate and clarify your position. | Does the use of plastics in food and drink containers pose a serious threat to human health? After reading scientific sources, write a report that addresses the question and support your position with evidence from the texts. Be sure to acknowledge competing views. Give examples from past or current events or issues to illustrate and clarify your position. |

Grade(s)/Level: 10- 12

Discipline: Science

Course: Chemistry

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# Section 1: What task?

***Content Standards:*** *Kentucky Core Content- Combined Science Curriculum (Unifying Concept)*

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| **Number** | **Content Standard(s)** |
| **SC- HS- 1.1.7** | Students will:   * construct diagrams to illustrate ionic or covalent bonding; * predict compound formation and bond type as either ionic or covalent (polar, nonpolar) and represent the products formed with simple chemical formulas.   **Bonds between atoms are created when outer electrons are paired by being transferred (ionic) or shared (covalent). A compound is formed when two or more kinds of atoms bind together chemically.**  DOK 2 |

COMMON CORE STATE STANDARDS

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| **READING STANDARDS FOR ARGUMENTATION** | |
| **“Built-in” Reading Standards** | **“When Appropriate” Reading Standards (applicable in black)** |
| 1- Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. | 3- Analyze how and why individuals, events, and ideas develop and interact over the course of a text. |
| 2- Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. | 5- Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., section, chapter, scene, or stanza) relate to each other and the whole. |
| 4- Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone. | 6- Assess how point of view or purpose shapes the content and style of a text. |
| 10- Read and comprehend complex literary and informational texts independently and proficiently. | 7- Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words. |
|  | 8- Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. |
|  | 9- Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take. |
| **WRITING STANDARDS FOR ARGUMENTATION** | |
| **“Built-in” Writing Standards** | **“When Appropriate” Writing Standards (applicable in black)** |
| 1- Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. | 2- Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. |
| 4- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. | 3- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences. |
| 5- Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. | 6- Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others. |
| 9- Draw evidence from literary or informational texts to support analysis, reflection, and research. | 7- Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation. |
| 10- Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audience. | 8- Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism. |

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| **Template Task** | |
| Task Number/Type/Level | Template Prompt |
| * Task 2 * Argumentation/ Analysis * Level 2 | [Insert question] After reading \_\_\_\_\_ (literature or informational texts), write a/an \_\_\_\_\_\_\_\_\_(essay or substitute) that addresses the question and support your position with evidence from the text(s). **L2** Be sure to acknowledge competing views. **L3** Give examples from past or current events or issues to illustrate and clarify your position. |

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| **Teaching Task** |
| Background:  Chemistry is the study of matter and the changes it undergoes; you were exposed to the properties of matter in an earlier unit but in this unit, you will be exposed to the "why" behind those properties. In order for you to comprehend your world and why materials are used for certain tasks or why they behave the way they do- you must understand the role that chemical bonding will play.  Prompt:  Does the use of plastics in food and drink containers pose a serious threat to human health? After reading scientific sources, write a report that addresses the question and support your position with evidence from the texts. Be sure to acknowledge competing views. Give examples from past or current events or issues to illustrate and clarify your position. |

**Scoring Rubric for Argumentation Template Tasks**

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| Scoring Elements | Not Yet | | Approaches Expectations | | | Meets Expectations | | | Advanced | |
| 1 | 1.5 | | 2 | 2.5 | | 3 | 3.5 | | 4 |
| Focus | Attempts to address prompt, but lacks focus or is off-task. |  | | Addresses prompt appropriately and establishes a position, but focus is uneven. |  | | Addresses prompt appropriately and maintains a clear, steady focus. Provides a generally convincing position. |  | | Addresses all aspects of prompt appropriately with a consistently strong focus and convincing position. |
| Controlling Idea | Attempts to establish a claim, but lacks a clear purpose. (L2) Makes no mention of counter claims. |  | | Establishes a claim. (L2) Makes note of counter claims. |  | | Establishes a credible claim. (L2) Develops claim and counter claims fairly. |  | | Establishes and maintains a substantive and credible claim or proposal. (L2) Develops claims and counter claims fairly and thoroughly. |
| Reading/ Research | Attempts to reference reading materials to develop response, but lacks connections or relevance to the purpose of the prompt. |  | | Presents information from reading materials relevant to the purpose of the prompt with minor lapses in accuracy or completeness. |  | | Accurately presents details from reading materials relevant to the purpose of the prompt to develop argument or claim. |  | | Accurately and effectively presents important details from reading materials to develop argument or claim. |
| Development | Attempts to provide details in response to the prompt, but lacks sufficient development or relevance to the purpose of the prompt. (L3) Makes no connections or a connection that is irrelevant to argument or claim. |  | | Presents appropriate details to support and develop the focus, controlling idea, or claim, with minor lapses in the reasoning, examples, or explanations. (L3) Makes a connection with a weak or unclear relationship to argument or claim. |  | | Presents appropriate and sufficient details to support and develop the focus, controlling idea, or claim. (L3) Makes a relevant connection to clarify argument or claim. |  | | Presents thorough and detailed information to effectively support and develop the focus, controlling idea, or claim. (L3) Makes a clarifying connection(s) that illuminates argument and adds depth to reasoning. |
| Organization | Attempts to organize ideas, but lacks control of structure. |  | | Uses an appropriate organizational structure for development of reasoning and logic, with minor lapses in structure and/or coherence. |  | | Maintains an appropriate organizational structure to address specific requirements of the prompt. Structure reveals the reasoning and logic of the argument. |  | | Maintains an organizational structure that intentionally and effectively enhances the presentation of information as required by the specific prompt. Structure enhances development of the reasoning and logic of the argument. |
| Conventions | Attempts to demonstrate standard English conventions, but lacks cohesion and control of grammar, usage, and mechanics. Sources are used without citation. |  | | Demonstrates an uneven command of standard English conventions and cohesion.  Uses language and tone with some inaccurate, inappropriate, or uneven features. Inconsistently cites sources. |  | | Demonstrates a command of standard English conventions and cohesion, with few errors. Response includes language and tone appropriate to the audience, purpose, and specific requirements of the prompt. Cites sources using appropriate format with only minor errors. |  | | Demonstrates and maintains a well-developed command of standard English conventions and cohesion, with few errors. Response includes language and tone consistently appropriate to the audience, purpose, and specific requirements of the prompt. Consistently cites sources using appropriate format. |
| Content Understanding | Attempts to include disciplinary content in argument, but understanding of content is weak; content is irrelevant, inappropriate, or inaccurate. |  | | Briefly notes disciplinary content relevant to the prompt; shows basic or uneven understanding of content; minor errors in explanation. |  | | Accurately presents disciplinary content relevant to the prompt with sufficient explanations that demonstrate understanding. |  | | Integrates relevant and accurate disciplinary content with thorough explanations that demonstrate in-depth understanding. |

# Section 2: What Skills?

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| **Section 2-Skills: *What skills do students need to succeed on the teaching task?*** | |
| Specific Skills  *What skills are essential?* | Skills Defined (“Ability to…”)  *How do you define/describe those skills?* |
| **Classroom Pre-instruction** | |
| 1. Bridging Conversation | Ability to establish knowledge base and assess skills and strategies necessary to manage task. |
| 1. Begin instructional sequence | Ability to understand and explain the teaching task’s prompt and rubric*.* |
| 1. Student project planning | Ability to plan a task so that reading and writing processes are accomplished on time |
| **Reading Process** | |
| 1. Reading “habits of mind” | Ability to select appropriate texts and understand necessary reading strategies needed for the task. |
| 1. Essential Vocabulary | Ability to apply strategies for developing an understanding of a text by locating words and phrases that identify key concepts and facts, or information. |
| 1. Note-taking 1 | Ability to read purposefully and select relevant information; to summarize and/or paraphrase. |
| 1. Note-taking 2 | Ability to prioritize and narrow supporting information. |
| **Transition to Writing** | |
| 1. Bridging Conversation | Ability to establish knowledge base and assess skills and strategies necessary to manage task. |
| **Writing Process** | |
| 1. Initiation of Task | Ability to establish a controlling idea and consolidate information relevant to task. |
| 1. Planning | Ability to develop a line of thought and text structure appropriate to an argumentation task. |
| 1. Development | Ability to construct an initial draft with an emerging line of thought and structure. |
| 1. Revision | Ability to apply revision strategies to refine development of argument, including line of thought, language usage, and tone as appropriate to audience and purpose. |
| 1. Editing | Ability to apply editing strategies and presentation applications. |

# Section 3: What instruction?

LDC Instructional Ladder

**Background/content:** Content can be taught before or during the module.

**Classroom Pre-Instruction**

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| **1.Bridging Conversation** | *Ability to establish knowledge base and assess skills and strategies necessary to manage task.* | *Pacing plan:*  *10- 15 minutes* |
| *Mini-task* | *Give students prompt and discuss the expectations by the end of the unit.*  *Prompt:*  Does the use of plastics in food and drink containers pose a serious threat to human health? After reading scientific sources, write a report that addresses the question and support your position with evidence from the texts. Be sure to acknowledge competing views. Give examples from past or current events or issues to illustrate and clarify your position. | *Product:*Discussion/ student feedback |
| *Mini-task scoring guide* | no scoring | |
| *Instructional strategies/ notes:* |  | |
| *PD/ preparation:* |  | |

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| *2.* **Begin instructional sequence** | *Ability to understand and explain the teaching task’s prompt and rubric.* | | *Pacing plan:*  *10- 15 minutes* |
| *Mini-task* | *Prompt:* Have students bring in two articles, one that argues for the use of plastics and one that argues against the use of plastics so we can have a brief discussion about what you’ve read. | | *Product:* Class Discussion |
| *Mini-task scoring guide* | No scoring | | |
| *Instructional strategies/ notes:* | * Review each student’s articles to ensure that relevant reading material is selected or provided. * Have students share ideas so that students can hear/know what each other is doing and encourage them to help each other when appropriate. * Discuss in detail the prompt, type of writing and structure, the product, and the rubric. | | |
| *PD/ preparation:* |  | | |
| *3.* **Student project planning** | | *Ability to plan a task so that reading and writing processes are accomplished on time* | *Pacing plan:*  *10- 15 minutes* |
| *Mini-task* | | *Prompt:* given a timeline- discuss with students | *Product:* Student Discussion |
| *Mini-task scoring guide* | | No Scoring | |
| *Instructional strategies/ notes:* | | * Model a common or sample timeline & homework * Provide students with a timeline template * Discuss the importance of planning | |

**Reading Process**

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| 1. **Reading “habits of mind”** | *Ability to select appropriate texts and understand necessary reading strategies needed for the task.* | | *Pacing plan:* |
| *Mini-task* | *Prompt:*  1) From the class packet of resources, identify sources you will use and highlight passages that show how each source relates to your task.  2) Note sources in bibliographic format (if applicable); | | *Product:* Highlighted passages to be used in the paper and a Bibliography |
| *Mini-task scoring guide* | Meets:   * Selects appropriate text(s) for task (if applicable) * Creates usable passages and a bibliography (if applicable) | Not yet:  Attempts to meet the criteria for “meets” | |
| *Instructional strategies/ notes:* | * Create a packet of sources from the student articles brought in, share with all the students so they have materials to draw from. * Demonstrate reading strategies relevant to a type of text to prepare students for next steps in the ladder. * Provide students with template for bibliography and explain format and use | | |
| *PD/ preparation:* | \* Take students to computer lab and allow them to search for additional sources they might use for their paper. | | |
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| *2.* **Note-taking 1** | *Ability to read purposefully and select relevant information; to summarize and/or paraphrase.* | | *Pacing plan:*  *1 day* |
| *Mini-task* | *Prompt:*  1.) Read selected sources and highlight information or vocabulary that pertains to the science- chemical bonding/ structures of matter.  2.) From your readings- write a sentence or two that explains how the chemical bonding and/or chemical structures affect the use of plastics and how chemical bonding is involved in your argument. | | *Product:* Highlighted passages and several sentences. |
| *Mini-task scoring guide* | Meets:   * Accomplishes task by selecting relevant source material to support controlling idea (include L2 and 3 if applied to task) * Answers question about plagiarism correctly and provides appropriate strategies for avoiding it * Writes in readable prose | Not yet: Attempts to meet the criteria for “meets” | |
| *Instructional strategies/ notes:* | * Review policy for plagiarism and develop students’ understanding of it. * Provide students with a note taking method(s) and template * Discuss the term “relevant” and what it means stay on task--two demands embedded in the rubric * Teach strategies for identifying and selecting source material in the form of quotes, passages, data, etc. as it relates to a controlling idea and task – give students strategies for avoiding “highlight sprawl.” * L2 Discuss what is meant by “credible sources” and strategies for knowing what is a credible source * L3 Discuss and demonstrate how authors “identify gaps” or “unanswered questions” and why this is important to inquiry * Identify any gaps or unanswered questions as you do you read about your topic. * Teach strategies for summarizing or paraphrasing | | |

**Transition to Writing**

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| *1.* **Bridging Conversation** | | *Ability to establish knowledge base and assess skills and strategies necessary to manage task.* | | | *Pacing plan:*  *10- 20 minutes* |
| *Mini-task* | | *Prompt:* In a quick write, write about what you know now that you’ve read about the use of plastics in food and drink containers. What additional information do you need to solidify your opinion and how will you go about getting that information? | | | *Product:* short response (with bullets) class work |
| *Mini-task scoring guide* | | No scoring |  | |
| *Instructional strategies/ notes:* | | * Review professional or other samples of writing type and structure. * Deconstruct professional samples of the type of writing students will engage in: provide sample conclusions (journal style and previous student work) to help students understand the expectations of the style of writing that is expected.   + Note the difference between an “explanation” and an “argument”   + Analyze purpose and audience   + Analyze tone and language choices   + Evaluate effectiveness – Do you get the information and explanation you expect? Why? * Discuss the prompt and what students need to do to complete the writing portion * Refer to rubric – point out demands and qualities of performance, such as “substantive and credible, clear, thorough, relevant, etc.” | | |

### Writing Process

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| *1.* **Planning** | *Ability to develop a line of thought and text structure appropriate to an argumentation task.* | | *Pacing plan:*  *45 minutes* |
| *Mini-task* | *Prompt:* Create an outline including key elements drawn from your reading and order them in some logical way so as to effectively answer the task prompt | | *Product:* Outline/plan |
| *Mini-task scoring guide* | Meets:   * Applies an outline strategy to develop reasoning for argument * Provides citations and references with elements for correct form * Draws a credible implication from information about an issue or topic * Writes in readable prose | Not yet: Attempts to meet the criteria for “meets” | |
| *Instructional strategies/ notes:* | * Mini-lessons in logic structures * Use discussion-based strategies to develop thinking relevant to prompt * Have students connect ideas among the arts, literature, events | | |
| *2.* **Development** | *Ability to construct an initial draft with an emerging line of thought and structure.* | | *Pacing plan:*  *1 day* |
| *Mini-task* | *Prompt:* Draft an opening for your composition with one or more sentences that establishes the controlling idea and provides a lead in for your reader.  Write an initial draft for your lab conclusion to include several paragraphs: an opening, development of your process, an ending to include either a comment, conclusion, or implication | | *Product:* Opening paragraph and first draft |
| *Mini-task scoring guide* | Meets:   * Provides an opening to include a controlling idea and an opening strategy relevant to the prompt * Provides an initial draft with all elements of the prompt addressed * Writes in readable prose | Not yet: Attempts to meet the criteria for “meets” | |
| *Instructional strategies/ notes:* | * How to open and end an argumentation composition * Use of template for all levels to guide students through first draft * Student-led revision sessions | | |

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| *3.* **Revision** | *Ability to apply revision strategies to refine development of argument, including line of thought, language usage, and tone as appropriate to audience and purpose.* | | *Pacing plan:* |
| *Mini-task* | *Prompt:* Apply revision strategies for clarity, logic, language, cohesion – will be using peers as well as the instructor | | *Product:* Revised drafts (2 or more) |
| *Mini-task scoring guide* | Meets:   * Demonstrates use of revision strategies that clarify logic and development of ideas; embeds relevant details; improves word-usage and phrasing; and creates smooth transitions between sentences and paragraphs * Applies a text structure to organize reading material content and to explain key points related to the prompt | Not yet: Attempts to meet the criteria for “meets” | |
| *Instructional strategies/ notes:* | * Develop ways to manage revision process so that students get feedback in timely and helpful ways * Draft study (students volunteer a segment for class or small group help and discussion) * Peer feedback on clarity of thinking and development of claim/argument * Read-aloud for peer and adult feedback * Strategies for embedding informational – citation methods, quoting, paraphrasing | | |

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| *4.* **Editing** | *Ability to apply editing strategies and presentation applications.* | | *Pacing plan: 1 day* |
| *Mini-task* | *Prompt:* Finalize draft for the readership; apply finishing touches (e.g. visuals, neatness, formatting, copy editing). | | *Product:* Next to final draft |
| *Mini-task scoring guide* | Meets:   * Demonstrates use of strategies that enhance the readability and appearance of the work for presentation | Not yet: Attempts to meet the criteria for “meets” | |
| *Instructional strategies/ notes:* | * Use of error analysis to encourage self-correction of language usage and grammatical errors * Use of copy-editing mark | | |

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| **Final Draft** | Submit your final draft before or on due date for scoring and feedback. |

**Materials, References, and Supports**

There are a variety of materials and supports available that teachers and students can access to support the teaching and learning of literacy skills – and, through the learning of those skills content area knowledge. This section includes the materials (or citations) necessary to teach the module. It may also include supports students can access on their own.

**Section 4: What results?**

Student work samples

[Include at least two samples of student work at each scoring level.]

Classroom Assessment Task (Optional: May be used as Pre-Test or Post-Test)

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| Background to share with students (optional): |  |
| Classroom assessment task | None |
| Reading texts: |  |

Argumentation Classroom Assessment Rubric

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| **LDC Argumentation Classroom Assessment Rubric** | |
| **MEETS EXPECTATIONS** | |
| Focus | Addresses the prompt and stays on task; provides a generally convincing response. |
| Reading/Research | Demonstrates generally effective use of reading material to develop an argument. |
| Controlling Idea | Establishes a credible claim and supports an argument that is logical and generally convincing. (L2) Acknowledges competing arguments while defending the claim. |
| Development | Develops reasoning to support claim; provides evidence from text(s) in the form of examples or explanations relevant to the argument (L3) Makes a relevant connection(s) that supports argument. |
| Organization | Applies an appropriate text structure to address specific requirements of the prompt. |
| Conventions | Demonstrates a command of standard English conventions and cohesion; employs language and tone appropriate to audience and purpose. |
| **NOT YET** | |
| Focus | Attempts to address prompt but lacks focus or is off-task. |
| Reading/Research | Demonstrates weak use of reading material to develop argument. |
| Controlling Idea | Establishes a claim and attempts to support an argument but is not convincing;  (L2) Attempts to acknowledge competing arguments. |
| Development | Reasoning is not clear; examples or explanations are weak or irrelevant. (L3) Connection is weak or not relevant. |
| Organization | Provides an ineffective structure; composition does not address requirements of the prompt. |
| Conventions | Demonstrates a weak command of standard English conventions; lacks cohesion; language and tone are not appropriate to audience and purpose. |

**Teacher Work Section**

Here are added thoughts about teaching this module.

**Appendix**

The attached materials support teaching this module.